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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,493	11/10/2003	Eric Hamilton	112056-0120	5124
24267	7590	08/29/2006	EXAMINER	
CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			PARDO, THUY N	
			ART UNIT	PAPER NUMBER
			2165	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/705,493

Applicant(s)

HAMILTON ET AL.

Examiner

Thuy N. Pardo

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-41 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Applicant's Amendment filed on June 29, 2006 in response to Examiner's Office Action has been reviewed. Claims 1-11, 15, 16 and 27-29 have been amended, and claims 30-41 have been added.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-20 and 27-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The content of these claims is limited to an abstract idea and they do not produce a tangible and concrete result.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-5, 10-18, 21-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Koseki et al. (Hereinafter "Koseki") US Patent No. 6,732,124.

As to claim 15, Koseki teaches the invention substantially as claimed, comprising:  
a write allocation process of a file system [log writing unit for repairing a file system when its consistency is lost, see the abstract] , the write allocation process adapted to associated received file data with a buffer data control structure upon receipt of a write operation directed to the file while the file is undergoing write allocation [col. 7, lines 45 to col. 8, lines 36; s2-s9 of fig. 15; acknowledgement, col. 26, lines 6-24].

As to claim 1, Koseki teaches the invention substantially as claimed, comprising:  
receiving a write operation comprising data to be written to the file [log buffer control table, and log write buffer, 148-150 of fig. 20];  
associating the received data with a buffer data control structure associated with the file [col. 26, lines 57 to col. 27, lines 8]; and

marking the buffer data control structure associated with the file as being dirty for a next consistency point [S18-S22 of fig. 17; col. 20, lines 21 to col. 21, lines 11].

As to claims 12, all limitations of this claim have been addressed in the analysis above, and this claim is rejected on that basis.

As to claim 21, Koseki teaches the invention substantially as claimed, comprising:  
determining if the buffer is dirty for the current consistency point [S13 of fig. 17; col. 20, lines 12 to col. 21, lines 2];

performing, in response to determining that the buffer is dirty for the current consistency point, write allocation of a buffer associated with the file for a current consistency point [col. 21, lines 3-11]; and

freeing, if the buffer is dirty for the next consistency point, data written during the step of write allocation [S18-S22 of fig. 17; col. 20, lines 21 to col. 21, lines 11].

As to claim 27, Koseki teaches the invention substantially as claimed, comprising:  
a flags array having entries for flags associated with a current consistency point and entries associated with a next consistency point [col. 20, lines 21 to col. 21, lines 11];  
a first data pointer pointing to a file data associated with the current consistency point [current log write pointer, col. 40, lines 43-55; col. 42, lines 59-63]; and  
a second data pointer pointing to file data associated with the next consistency point [col. 42, lines 59-63; col. 43, lines 1-5].

As to claim 10, Koseki teaches the invention substantially as claimed. Koseki further teaches that entries associated with the current consistency point and the next consistency point are differentiated by performing modulo two addition to a consistency point counter [col. 40, lines 44-62; col. 42, lines 55 to col. 43, lines 23].

As to claim 14, Koseki teaches the invention substantially as claimed. Koseki further teaches that the second pointer in the buffer data control structure points to data already written to the file [col. 42, lines 43 to col. 43, lines 26].

As to claims 2-5, 9, 11, 16-20, 22-26, 28 and 29, all limitations of these claims have been addressed in the analysis above, and these claims are rejected on that basis.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2165

3. Claims 30-34 and 36-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Hitz et al. (hereinafter "Hitz") US Patent Application No. 2004/0064474.

As to claim 30, Hitz teaches the invention substantially as claimed, comprising:  
receiving the write operation and information associated therewith, the write operation directed to the file to be written to during a next consistency point [0057; 410 of fig. 4; ab]; and  
differentiating the information associated with the write operation from information currently undergoing write operation [520 of fig. 5; 0060].

As to claim 31, Hitz teaches the invention substantially as claimed. Hitz further teaches modifying an inode associated with the file [0100].

As to claim 32, Hitz teaches the invention substantially as claimed. Hitz further teaches that the inode comprises an in core section and an on disk section [0045-0046].

As to claim 33, Hitz teaches the invention substantially as claimed. Hitz further teaches modifying a flag field of the inode [0047].

As to claim 34, Hitz teaches the invention substantially as claimed. Hitz further teaches that the modified flag indicates that the file was modified during a consistency point [0054; 0061; 0063; 0100].

Art Unit: 2165

As to claims 36-40, all limitations of these claims have been addressed in the analysis of claims 30-35 above, and these claims are rejected on that basis.

***Allowable Subject Matter***

4. Claims 6-9, 19, 20, 35 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 6 and 19, the feature that entries associated with a current consistency point are accessed by indexing into the flags array using a value calculated by performing a logical AND operation on a consistency point counter and a value of 1, taken together with other limitations of claims 1 and 5, or 15 and 16 were not disclosed by the prior art of record.

As to claims 8 and 20, the feature that entry associated with the next consistency point is accessed using an index value calculated by subtracting from a value of 1 a result of performing a logical AND operation on a consistency point counter and a value of 1, taken together with other limitations of claims 1 and 5, or 15 and 16 were not disclosed by the prior art of record.

Claims 7 and 9 being further limiting to claims 6 and 8 are also objected to.



As to claims 35 and 41, Hitz teaches the invention substantially as claimed. Hitz further teaches modifying a shadow index associated with the information, taken together with other limitations of claims 30, 31 and 33, or 36, 37 and 39 were not disclosed by the prior art of record.

### ***Response to Arguments***

5. Applicant argues that claims 1-20 and 27-29 allows write allocation during CP that result in an "immediate benefit" to client of decreased latency caused by a large number of incoming write operations that may be queued and suspended while the CP write allocation operation is performed (page 5, lines 10-30).

As to this point, Examiner respectfully disagrees. It is noted that the features upon which applicant relies (i.e., immediate result to client) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Koseki does not teach marking data as being dirty for a next consistent point.

Examiner respectfully disagrees. It should be noted that Koseki teaches this feature. Koseki teaches a deallocation-dirty flag set to one or zero, the corresponding bitmap blocks on the memory must have new information, meaning that they have to be recorded by the logging system [col. 20, lines 1 to col. 21, lines 11].

Applicant argues that Koseki does not teach writing allocate to file while the file is undergoing write allocation.

Art Unit: 2165

Examiner respectfully disagrees. Koseki teaches two concurrent transactions requesting and releasing a resource [see fig. 19; col. 21, lines 45-54]

6. Applicant's arguments filed on June 09, 2006 have been fully considered but they are not persuasive.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

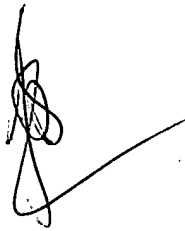
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy Pardo whose telephone number is 571-272-4082. The examiner can normally be reached on Mon-Thur.

Art Unit: 2165

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 23, 2006

A handwritten signature in black ink, appearing to be 'THUY N. PARDO', with a long horizontal line extending to the right.

**THUY N. PARDO**  
**PRIMARY EXAMINER**